Titanium Silicon Carbide Powder

Catalogue no -

NS6130-12-000617
Titanium Silicon Carbide Powder

There are more than ten MAX phase systems and more than fifty MAX phases. This work is focused to produce Ti$_3$SiC$_2$ MAX phase using Si, C, TiC powders. The MAX phases constitute a group of ternary ceramics which has received intense attention over the last decade due to their unique combination of properties. The Ti$_3$SiC$_2$ is the most well studied MAX phase to date and it has turned out to be a promising candidate for high temperature applications. It is oxidation resistant, refractory and not susceptible to thermal shock. It can be machined with conventional tools, which is of great technological importance.

Quick Facts

<table>
<thead>
<tr>
<th>Product</th>
<th>Titanium Silicon Carbide Powder</th>
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</thead>
<tbody>
<tr>
<td>Stock No</td>
<td>NS6130-12-000617</td>
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<tr>
<td>CAS</td>
<td>12202-82-3</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>Ti$_3$SiC$_2$</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>195.71g/mol</td>
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<tr>
<td>Form</td>
<td>Powder</td>
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<tr>
<td>Colour</td>
<td>Dark gray</td>
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</tbody>
</table>

Properties:

- High fracture toughness
- Low hardness to elastic modulus ratio
- Excellent damage tolerance
- Good thermal shock
- Oxidation resistance
- Good electric conductivities

Applications:

- Aerospace engine (procreative coating)
- Nano-adsorption
- Biosensors
- Ion sieving
- Catalysis
- Lithium-ion batteries
- Super capacitors
- Lubrication
- Jet engine applications

Packing Sizes:

25Gms, 50Gms, 100Gms, 500Gms & Bulk Orders